

ABSTRACT

The present invention provides a steel having excellent formability, fatigue endurance after quenching, low temperature toughness, resistance for hydrogen embrittlement, and corrosion fatigue endurance. Resolving means includes heating a steel slab at 1160°C to 1320°C, hot-finish-rolling the steel slab at a finisher delivery temperature of 750°C to 980°C, and then coiling the hot-rolled steel at a coiling temperature of 560°C to 740°C after slow cooling for a time of 2 seconds or more to produce a hot-rolled steel strip having a structure in which the ferrite grain diameter d_f corresponding to a circle is 1.1 μm to less than 1.2 μm and the ferrite volume fraction V_f is 30% to 98%, the steel slab containing 0.18 to 0.29% of C, 0.06 to 0.45% of Si, 0.91 to 1.85% of Mn, 0.019% or less of P, 0.0029% or less of S, 0.015 to 0.075% of sol. Al, 0.0049% or less of N, 0.0049% or less of O, 0.0001 to 0.0029% of B, 0.001 to 0.019% of Nb, 0.001 to 0.029% of Ti, 0.001 to 0.195% of Cr, and 0.001 to 0.195% of Mo so that the carbon equivalent C_{eq} satisfies a value of 0.4 to less than 0.58, and the total x of multiplying factors including that for B according to Grossmann satisfies a value of 1.2 to less than 1.7. The hot-rolled steel strip is used as a raw material for producing a steel tube by electric resistance welded tube making with a width reduction of hoop of 8% or less.